

WHAT IS CLAIMED:

1. A cutting tool for drilling and turning, comprising:
a base body comprising a clamping part and a working part axially spaced from each other; and
an indexable tip, releasably connected to said working part, comprising a hexagonal shape having at least one circumferential cutting edge and obtuse and acute corner angles.
2. The cutting tool in accordance with claim 1, wherein said working part is essentially cylindrical.
3. The cutting tool in accordance with claim 1, wherein said indexable tip is positioned at an end of said working part remote from said clamping part.
4. The cutting tool in accordance with claim 1, wherein said working part comprises a flute running in a direction of a tool axis and a form-locking seat for said indexable tip.
5. The cutting tool in accordance with claim 4, wherein, when said indexable tip is seated on said working part, at least one cutting edge slightly projects from said working part.
6. The cutting tool in accordance with claim 4, wherein said flute running in a direction of said tool axis is formed with a twist.
7. The cutting tool in accordance with claim 1, wherein said hexagonal shape of said indexable tip comprises alternately obtuse and acute corner angles and six straight cutting edges.
8. The cutting tool in accordance with claim 7, wherein a greatest width of said indexable tip is at least about 0.92 times a diameter of said working part.
9. The cutting tool in accordance with claim 1, wherein said at least one cutting edge comprises three cutting edges, and wherein a trajectory of at least a part

of one of said three cutting edges projects slightly beyond an outer contour of said working part.

10. The cutting tool in accordance with claim 1, wherein said base body comprises at least one bore for inserting at least one of coolant and lubricant, and an exit of said at least one bore is directed at said indexable tip.

11. The cutting tool in accordance with claim 10, wherein said exit of said at least one bore is obliquely arranged relative to a tool axis.

12. The cutting tool in accordance with claim 11, wherein said exit of said at least one bore is arranged at an angle between about 15° and 75° to said tool axis.

13. The cutting tool in accordance with claim 12, wherein said exit of said at least one bore is arranged at an angle between about 25° and 45° to said tool axis.

14. The cutting tool in accordance with claim 1, wherein said indexable tip comprises a center hole and the center hole of said indexable tip is eccentrically positioned outside a center of said working part.

15. The cutting tool in accordance with claim 1, wherein said at least one cutting edge comprises a plurality of cutting edges arranged to form acute angled corners having an angle of about $88^\circ \pm 1.7^\circ$.

16. The cutting tool in accordance with claim 15, wherein said at least one cutting edge comprises a plurality of cutting edges arranged to form acute angled corners having an angle of about $88^\circ \pm 0.3^\circ$.

17. The cutting tool in accordance with claim 1, wherein a front cutting edge of said indexable tip forms an angle of about $89.8^\circ \pm 0.5^\circ$ with an axis of tool rotation.

18. An indexable tip for a cutting tool for the machining of materials, comprising:

a flat supporting area;

a face opposite said supporting area;
said flat supporting area and said face being arranged to form open spaces
coupling said supporting area and said face; and
six circumferential cutting edges arranged to form acute and obtuse angled
corners,

wherein a vertical distance of said cutting edges from said supporting area in
a region of said obtuse-angled corners is a minimum.

19. The indexable tip in accordance with claim 18, wherein said cutting tool
is structured for the machining of metals and alloys.

20. The indexable tip in accordance with claim 18, further comprising an
attachment device formed as a center hole.

21. The indexable tip in accordance with claim 18, wherein said cutting
edges are arranged to form alternately acute-angled corners and obtuse-angled
corners.

22. The indexable tip in accordance with claim 18, wherein said cutting
edges form acute angled corners having an angle of about $88^{\circ} \pm 1.7^{\circ}$.

23. The indexable tip in accordance with claim 22, wherein said acute
angled corners are about $88^{\circ} \pm 0.5^{\circ}$.

24. The indexable tip in accordance with claim 22, wherein said acute
angled corners are about $88^{\circ} \pm 0.3^{\circ}$.

25. The indexable tip in accordance with claim 18, wherein said cutting
edges are oriented at an angle of between about 2° and 10° to said supporting area.

26. The indexable tip in accordance with claim 25, wherein said cutting
edges are oriented at an angle between about 4° and 8° to said supporting area.

27. The indexable tip in accordance with claim 25, wherein said cutting
edges are oriented at an angle of about $7^{\circ} \pm 0.5^{\circ}$ to said supporting area.

28. The indexable tip in accordance with claim 18, wherein a part of said face immediately bordering said cutting edge forms an angle of between about 2° and 18° with said supporting area.

29. The indexable tip in accordance with claim 28, wherein a part of said face immediately bordering said cutting edge forms an angle of between about 4° and 12° with said supporting area.

30. The indexable tip in accordance with claim 28, wherein a part of said face immediately bordering said cutting edge forms an angle of between about 5° and 10° with said supporting area.

31. The indexable tip in accordance with claim 18, wherein the open spaces form an angle of between about 5° and 12° with a straight line normal to said supporting area at said cutting edges.

32. The indexable tip in accordance with claim 31, wherein the open spaces form an angle of between about 6° and 11° with a straight line normal to said supporting area at said cutting edges.

33. The indexable tip in accordance with claim 31, wherein the open spaces form an angle of about $7^{\circ} \pm 0.5^{\circ}$ with a straight line normal to said supporting area at said cutting edges.

34. The indexable tip in accordance with claim 18, wherein the open spaces are divided into at least two sections comprising a first section, bordering the cutting edges, forming an angle of between about 5° and 12° , and a second section, bordering said supporting area, forming an angle of between about 12° to 25° with a straight line normal to said supporting area.

35. The indexable tip in accordance with claim 34, wherein said first section forms an angle of between about 6° and 11° .

36. The indexable tip in accordance with claim 34, wherein said first section

forms an angle of about $7^{\circ} \pm 0.5^{\circ}$.

37. The indexable tip in accordance with claim 34, wherein said second section forms an angle of between about 14° and 22° .

38. The indexable tip in accordance with claim 34, wherein said second section forms an angle of about $15^{\circ} \pm 0.5^{\circ}$,

39. The indexable tip in accordance with claim 18, wherein said corners are rounded off.